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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,470	02/06/2004	William R. LaCourse	2254.0010001	6717

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EXAMINER

RAEVIS, ROBERT R

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,470

Applicant(s)

LACOURSE ET AL.

Examiner

Robert R. Raevis

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-9-04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Art Unit: 2856

DETAILED ACTION

Election of Group II with traverse is acknowledged. As to Applicant's argument on p. 2, second full paragraph, please note that each of Groups I-IV are classifiable in different subclasses.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 2856

Claims 1,3-6,7,8,14 are rejected under 35 U.S.C. 102(e) as being anticipated by Lindstrom '493.

Lindstrom teaches (Figure 1) an apparatus, including: polytetrafluorethylene membrane 2 on a support, vacuum source 3 and analyzer 5. The membrane passes gas, and does not pass liquid. The membrane is in fluid communication with a trap 7.

Claims 1-3,4,8-10,14,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sjostrom et al in view of Hubbell et al in view of Liang et al.

Sjostrom et al teach (Figure 1) a system employing: filter 42 with support, heater 35 for the filter, and sample extraction lines 48,49. The sampled "mercury" (col. 1, line 1) is analyzed.

Sjostrom does not refer to vacuum, state that the porous metal is semi-permeable, and does not clearly state that the analyzer is in fluid communication with the filter.

As to claims 1-3,4,8,9,10,14,20, porous metal is a semipermeable material, as evidenced by claim 10 of Hubbell et al. Also, it would have been obvious to connect a gas chromatograph directly to extraction lines 48,49 because Liang et al teach (first page, right hand col. Line 4) that GC may detect mercury. GC's employ vacuum to pass samples. In addition, it is known to utilize sample valves (with loops) to remove a predetermined volume of sample for GC analysis.

Claims 1-3,4,7-10,13,14,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traina et al '432 in view of Chobotov et al in view of Hubbell et al.

Art Unit: 2856

Traina teaches (Figure 1) an apparatus, including: heated sintered metal filter 24 through which sample is drawn via a pump 10. The sample passes through a chiller 18 and analyzer 22.

Traina does not state that the filter is a semipermeable membrane.

As to claims 1,2,3,7,8,14, Chobotov teaches (col. 22, lines44-45) that sintered metal is porous, while Hubbell teaches (claim 10)that porous metal is semi-permeable. In addition, use of membranes of filters is common, as they allow for filtering over a larger area.

As to claims 4,9,10,13,20, Traina's analyzer 22 is schematic in nature, suggestive of use of any known analyzer that may measure process/combustive gases. It is known to apply GC with sample loops for analysis.

Claims 1,3-6,8,14 are rejected under 35 U.S.C. 102(b) as being anticipated by Long et al '328.

Long et al teach (Figure 1) an apparatus, including: "PTFE " (col. 2, line 16) membrane; vacuum source 25 and analyzer.

Claims 4,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al.

As to claims 4 and 9, it would have been obvious to employ a GC for an analyzer because Long teaches the "gas chromatographs" (col. 1, line 12) successfully sense gases of interest. In addition, gas chromatographs commonly employ sample valves with loops to provide a predetermined volume sample for analysis.

Art Unit: 2856

Claims 1,2,3,5,6,4,7,8,9,10,11,12,13,14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Springmann in view of Traina et al '010, in view of Long et al.

Springmann teaches (col. 1, lines 4-40) a system, including: a vacuum ("sucked" on line 10) system to draw a sample through a heated line, the sample subsequently passing through a "trap" (line 25) and on to "analysis apparatus" (line 11). A "filter" (line 32) is located between the probe (inlet) and the heated line to hold particles, but the filter may be equipped with a "heating device" (col. 1, line 44).

Springmann does not describe the material of construction of the filter, or the particular analyzer.

As to claims 1,2,3,5,6,7,8,11,12,13,14,4,9,10,20, it would have been obvious to employ a Teflon filter for Springmann's filter because Traina teaches (col. 8, line 29-40) that Teflon filter will satisfactorily collect moisture and prevent particulates from entering into the sample channel of a flue probe.

As to claims 4,9,10, 20,it would have been obvious to employ a GC for Springmann's analyzer because Long teaches (col. 1, lines 10-15) that GCs to accurately sense gas concentrations. Gas Chromatographs commonly employ sample valves with loops to inject columns with predetermined volumes of sample of interest for analysis.

Claims 1-3,5,6,7,8,14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcote et al in view of Traina et al '010.

Art Unit: 2856

Marcote et al teach (Figure 1) an apparatus, including: Teflon membrane 32, through which sample is drawn, and subsequently sent to an analyzer 146.

Marcote does not use a vacuum to draw that sample to the analyzer, and does not employ a gas chromatograph.

As to claims 1,3, it would have been obvious to draw gas from the membrane and towards the analyzer because Traina et al teach use of a vacuum 48 to effectively draw sample material through a filter, and towards an analyzer.

As to claim 2, note the OVEN in Figure 1 of Marcote.

As to claim 7, Traina teaches use of a chiller 18 to provide for a dry sample for proper analysis.

Claims 4,9,10-13,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcote et al in view of Traina et al '010 in view of Long et al.

Comments that exist above similarly apply here.

As to claims 4,9,10-13,20, it would have been obvious to employ a GC for Marcote's analyzer 146 because Long teaches (col. 1, lines 10-20) use of a GC to effectively analyzer combustion gas. GC commonly employ sample loops to sample predetermined volumes for analysis.

As to claim 13, Traina teaches use of a chiller 18 to provide for a dry sample for proper analysis.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

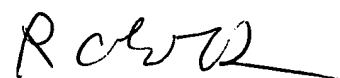
Broerman teaches a sample loop 32 and valve for GC system.

Art Unit: 2856

Szerenyi et al employs a membrane 20 in a heated volume 18 for drawing samples.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raemis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 6:30am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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